Some Noteworthy Catskill Plants.—The presence of several plant species of boreal affinity in the Catskill Mountains, New York, where they are comparatively isolated, seems worthy of mention.

In 1943, Mr. Edward M. Shields published a delightful article entitled *Porcupines and Ferns* [Am. Fern. Jour. **33** (2): 57–59], in which he described the finding of *Dryopteris fragrans* (L.) Schott var. *remotiuscula* Komarov (as *D. fragrans*) in the Catskills. As this represented a considerable range extension, the writer was glad to join Mr. Shields and Dr. Edgar T. Wherry on June 24–26, 1946, in a further search for this species and associated plants.

We investigated a number of cool, moist, north-facing ravines in the vicinity of Haines Falls, Greene County, and found the object of our search growing profusely in several of them, together with a few plants of typical *Lycopodium selago* L. and large quantities of *Sedum roseum* (L.) Scop.

The nearest previously known localities for *D. fragrans remotiuscula* are north-central Vermont, the Adirondack region, and various points around the Great Lakes. *L. selago* ranges further south on the higher peaks of New England, and is found at several widely separated localities in the Appalachians, south to North Carolina. *S. roseum*, like the others, is a circumpolar boreal species with a very sporadic range in northeastern United States, being known along the coast of Maine, at two localities in Vermont, at Chittenango Falls, Watkins Glen and Seneca Lake, N. Y., opposite Port Jervis and at Nockamixon Rocks, both along the Delaware River in Pennsylvania, and at Roan Mountain, North Carolina.

At the Haines Falls, New York, locality of the above it was noted that the soil about the roots of these plants was slightly acid, with a pH of 6 as determined by several readings. At Haines Falls itself, where the moist, overhanging cliffs have long been known to support such plants as *Woodsia glabella* R. Br. and *Cryptogramma stelleri* (Gmel.) Prantl, the soil, as well as the water dripping from the cliffs, was neutral with a pH of 7. Growth conditions at the two places seemed identical except for the slight difference in pH, yet the distinction apparently is sufficient to prevent intermingling of the two groups of boreal species.

Pressed specimens of all the above plants have been deposited at the Academy of Natural Sciences of Philadelphia.—GEORGE R. PROCTOR, University of Pennsylvania.

THE USE OF FORMALDEHYDE IN PLANT COLLECTING[1]

RICHARD EVANS SCHULTES[2]

The preparation of plant specimens for the herbarium is not a difficult task. The usual procedures, however, are sometimes awkward to apply or unsatisfactory under certain conditions. Such is the case, for example, in unfavorable tropical climates or when treating certain groups of plants in which immediate and rapid drying causes undesirable changes in the plant tissues, resulting in the disintegration of the specimen upon subsequent handling.

As is well known, the general procedure is to dry plant specimens in the field. Some botanists are accustomed to use gasoline pressure stoves, in which case the plant press, with the specimens between blotters and corrugated metal or cardboard sheets, is suspended above the source of heat so that currents of hot air pass up through the corrugated sheets. The position of the press is changed from time to time, and the specimens dry rapidly, requiring from two to forty-eight hours, depending upon the texture and fleshiness of the tissues.

Other botanists prefer to dry more slowly, placing the press of corrugated sheets with plants in the sun so that the specimens dry gradually with solar heat and wind which circulates between the corrugates.

In my opinion, specimens prepared by these two procedures in the field can be of equally high quality. If the specimens be carefully prepared, one usually cannot distinguish those dried rapidly with artificial heat from those dried slowly with solar heat. The difference between the two methods is not in the

[1] Translation from the Spanish, by the writer, of an article entitled: "El uso de formol en la recolección de plantas" which appeared in the *Revista de la Facultad de Agronomía* (Medellín, Colombia) vol. vi, no. 22 (1946) 46–52.

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